

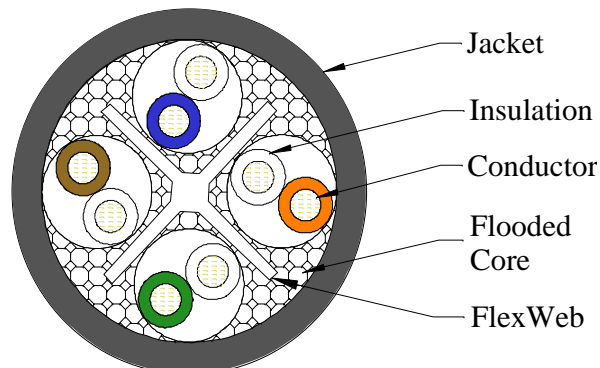
SPECIFICATION
VersaLAN® INDOOR/OUTDOOR
4 PAIR #23 AWG UTP CAT 6

Design Number:
LT55553

DESCRIPTION

THE CABLE IS SUITABLE FOR USE IN BUILDINGS IN WET LOCATIONS AND SUITABLE FOR USE OUTDOOR IN DUCT AND FOR AERIAL LASHING. IT IS FULLY WATER BLOCKED AND HAS A SUNLIGHT RESISTANT JACKET. IT IS NOT SUITABLE FOR DIRECT BURIAL. PRINT INCLUDES DESCENDING FOOTAGE MARKERS FROM 1000 TO 0 ON EACH 1000 FT REEL. SEE BELDEN.COM/P FOR ANY/ALL APPLICABLE PATENT DETAILS.

THE CABLE IS NEC RATED FOR GENERAL PURPOSE COMMUNICATIONS USE IN ACCORDANCE WITH ARTICLE 800 OF THE NATIONAL ELECTRICAL CODE (NEC). THE CABLE IS UL (USA) & CUL (CANADA) LISTED FOR THIS APPLICATION BY PASSING UL 1581 VERTICAL TRAY FLAME TEST.



SUPPORTED APPLICATIONS

IEEE 802.3 10BASE-T (ETHERNET), 100BASE-T (FAST ETHERNET), AND 1000BASE-T (GIGABIT ETHERNET), IEEE 802.3af POWER OVER ETHERNET FOR VoIP, ANSI.X3.263 FDDI TP-PMD, IEEE 802.5 4 AND 16 Mbps TOKEN RING, ATM UP TO 155 Mbps, 550 MHz BROADBAND VIDEO AND STANDARDS UNDER DEVELOPMENT SUCH AS ATM AT 622 Mbps, 1.2 & 2.4 Gbps.

CONSTRUCTION

PRIMARIES: CONDUCTOR: 23 AWG (.6 mm) SOLID BARE COPPER
INSULATION: THERMOPLASTIC POLYOLEFIN

PAIR ASSEMBLY: 2 PRIMARIES TWISTED IN VARIED LAYS

COLOR CODE: SEE TABLE 1 (WHITE CONDS HAVE INTEGRAL STRIPE TO MATCH THEIR MATE)

CABLE ASSEMBLY: 4 PAIRS CABLED TOGETHER WITH A FLEXWEB® CORE SEPARATOR

JACKET: MATERIAL: UV-RESISTANT FR POLYOLEFIN
NOMINAL WALL: .040" (1.02 mm)
NOMINAL DIAMETER: .275 (6.99 mm)
COLOR: SEE TABLE 2

NOTE: CABLE FLOODED FOR MOISTURE PROTECTION

LISTINGS: C(UL)US OR C(ETL)US TYPE CM-LS
ABS APPROVED

TABLE 1

PAIR NUMBER	PAIR COLOR CODE	
1	WHITE-BLUE	BLUE
2	WHITE-ORANGE	ORANGE
3	WHITE-GREEN	GREEN
4	WHITE-BROWN	BROWN

PHYSICAL CHARACTERISTICS

CABLE WEIGHT w/REEL: 43 lbs/1000ft (64 kg/km)

BEND RADIUS: 2.75" (70 mm) MIN (10 x CABLE OD)

PULLING TENSION: 25 lbf (110 N) MAX

OPERATING TEMP.: -40°C to +60°C (-40°F to +140°F)

STORAGE TEMP.: -40°C to +75°C (-40°F to +167°F)

***INSTALLATION TEMP.:** -20°C to +60°C (-4°F to +140°F)

* THE INSTALLATION TEMPERATURE REFERS TO THE TEMPERATURE OF THE CABLE WHILE BEING INSTALLED OR PULLED.

FLAME, SMOKE, ZERO HAL. CHARACTERISTICS

FLAME TESTS: UL 1685 VERTICAL TRAY, IEEE 383
IEC 60332-1-2, 1-3, UL VW-1, CSA FT1

LIMITED SMOKE: -LS PER UL 1685

SMOKE DENSITY: IEC 61034-1 & -2

COMBUSTION GASSES: IEC 60754-1 & -2



TABLE 2

PART NUMBER	DESIGN NUMBER	JACKET COLOR
M58772	LT55553	BLACK
M59010	LT57442	GREEN
M59092	LT57686	WHITE
M59093	LT57687	IVORY
M59094	LT57688	GRAY
M59131	LT57850	RED
M59132	LT57852	BLUE

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Rev	Description	Date	Init.
O	ADD RED OPTION TO TABLE 2	04/03/14	JS
P	ADD BLUE OPTION TO TABLE 2	04/16/14	JS
Q	ADJUST TABLE 3	06/24/14	JS
R	UPDATE DESC WITH SQ FT MKS	06/24/16	JS
Date: 01/12/07		Page 1 of 2	
Orig:		Review:	
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SPECIFICATION

VersaLAN® INDOOR/OUTDOOR 4 PAIR #23 AWG UTP CAT 6

Design Number:
LT55553

ELECTRICAL CHARACTERISTICS (REF TABLE 3)

STANDARDS: MEETS ANSI/TIA-568-C.2 CAT 6,
ICEA S-90-661-1997 CAT 6 &
ISO/IEC 11801:2002 CAT 6
HORIZONTAL CABLE

CONDUCTOR DCR: 9.38 Ω /100m (28.6 Ω /Mft) MAX

DCR UNBALANCE: 5% MAX

MUTUAL CAPACITANCE: 46 pF/m NOM

CAPACITANCE UNBALANCE PAIR/GROUND: 66 pF/100m MAX

CHARACTERISTIC IMPEDANCE: 100 $\Omega \pm 15\%$ (1-250 MHz)

INPUT IMPEDANCE: 100 $\Omega \pm 15\%$ (1-100 MHz)
100 $\Omega \pm 20\%$ (>100-200 MHz)
100 $\Omega \pm 25\%$ (>200 MHz)

RETURN LOSS (RL): 20 + 5 $\log_{10}(f)$ dB MIN (1-10 MHz)
25 dB MIN (>10-20 MHz)
25 - 7 $\log_{10}(f/20)$ dB MIN (>20 MHz)

INSERTION LOSS: $1.808\sqrt{f} + .017f + \frac{.20}{\sqrt{f}}$ dB/100m MAX

NEAR END CROSSTALK (NEXT): 44.3 - 15 $\log_{10}(f/100)$ dB/100m MIN

POWER SUM NEAR END CROSSTALK (PS-NEXT): 42.3 - 15 $\log_{10}(f/100)$ dB/100m MIN

EQUAL LEVEL FAR END CROSSTALK (ELFEXT): 27.8 - 20 $\log_{10}(f/100)$ dB/100m MIN

POWER SUM EQUAL LEVEL FAR END CROSSTALK (PS-ELFEXT): 24.8 - 20 $\log_{10}(f/100)$ dB/100m MIN

PROPAGATION DELAY: 534 + 36 / \sqrt{f} ns/100m MAX

DELTA DELAY (SKEW): 45 ns/100m MAX

NOMINAL VELOCITY OF PROPAGATION (NVP): 65%

WHERE f = FREQUENCY IN MHz from .772 to 250 MHz.

TABLE 3

REFERENCE ELECTRICAL CHARACTERISTICS

FREQ (MHz)	INSERTION LOSS (dB/100m)		NEXT (dB/100m)		ACR (dB/100m)	PS-NEXT (dB/100m)		PS-ACR (dB/100m)	ELFEXT (dB/100m)	PS-ELFEXT (dB/100m)	RL (dB)
	avg	max	avg	min	min	avg	min	min	min	min	min
.772	1.7	1.8	82	76.0	74.2	77	74.0	72.2	-	-	-
1.0	1.9	2.0	80	74.3	72.3	75	72.3	70.3	67.8	64.8	20.0
4.0	3.6	3.8	71	65.3	61.5	66	63.3	59.5	55.8	52.8	23.0
8.0	5.1	5.3	67	60.8	55.5	62	58.8	53.5	49.7	46.7	24.5
10.0	5.7	6.0	65	59.3	53.3	60	57.3	51.3	47.8	44.8	25.0
16.0	7.3	7.6	62	56.2	48.6	57	54.2	46.6	43.7	40.7	25.0
20.0	8.1	8.5	61	54.8	46.3	56	52.8	44.3	41.8	38.8	25.0
25.0	9.1	9.5	59	53.3	43.8	54	51.3	41.8	39.8	36.8	24.3
31.25	10.2	10.7	58	51.9	41.2	53	49.9	39.2	37.9	34.9	23.6
62.5	14.8	15.4	53	47.4	32.0	48	45.4	30.0	31.9	28.9	21.5
100.0	19.0	19.8	50	44.3	24.5	45	42.3	22.5	27.8	24.8	20.1
155.0	24.2	25.2	47	41.4	16.3	42	39.4	14.3	24.0	21.0	18.8
200.0	27.8	29.0	46	39.8	10.8	41	37.8	8.8	21.8	18.8	18.0
250.0	31.5	32.8	44	38.3	5.5	39	36.3	3.5	19.8	16.8	17.3
300.0	35.0	36.4	43	37.1	0.7	38	35.1	--	18.3	15.3	16.8
350.0	38.2	39.8	42	36.1	--	37	34.1	--	16.9	13.9	16.3
400.0	41.3	43.0	41	35.3	--	36	33.3	--	15.8	12.8	15.9
500.0	47.0	48.9	40	33.8	--	35	31.8	--	13.8	10.8	15.2
550.0	49.7	51.8	39	33.2	--	34	31.2	--	--	--	14.9

SWEEP TESTED TO 550 MHz; VALUES ABOVE 250 MHz ARE FOR ENGINEERING INFORMATION ONLY.



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